



12 CTS/DOC

RAVEN WEATHER OC/T INBRIEF



Monday, October 22, 201



Overview

Mission

Prepare and integrate Battlefield Weather Airmen into the Army's planning and operations.



Primary role always remains to collect and exploit weather intelligence in support of Army plans and operations. The additional training is to prepare personnel for operating in hostile, austere environments as an asset for units assigned direct support by Air Force Weather units.



Joint Air Force & Army Training

JRTC/NTC: ACC/A3W and USAF/A3O-W prioritize JRTC/NTC ahead of airfield wx support

- **IMCOM concerns...Army warfighter advocacy appreciated**
- **Garrison-airfield backfill support available (AF funds)**

Desire: Include wx in JRTC/NTC “grade”

- **How well did BCT staff use wx in the operation? (e.g. test application of FM 2-50.5)**
- **How well did SWO integrate with the staff?**
- **How effectively did BCT and SWO leverage theater forecast unit (i.e. operational weather squadron)?**

(Army) NIPR or SIPR comm for SWO in the box a must

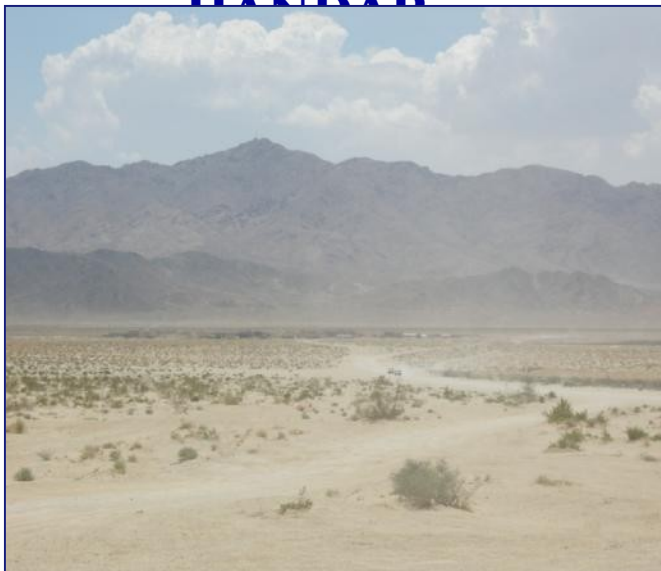


National Training Center

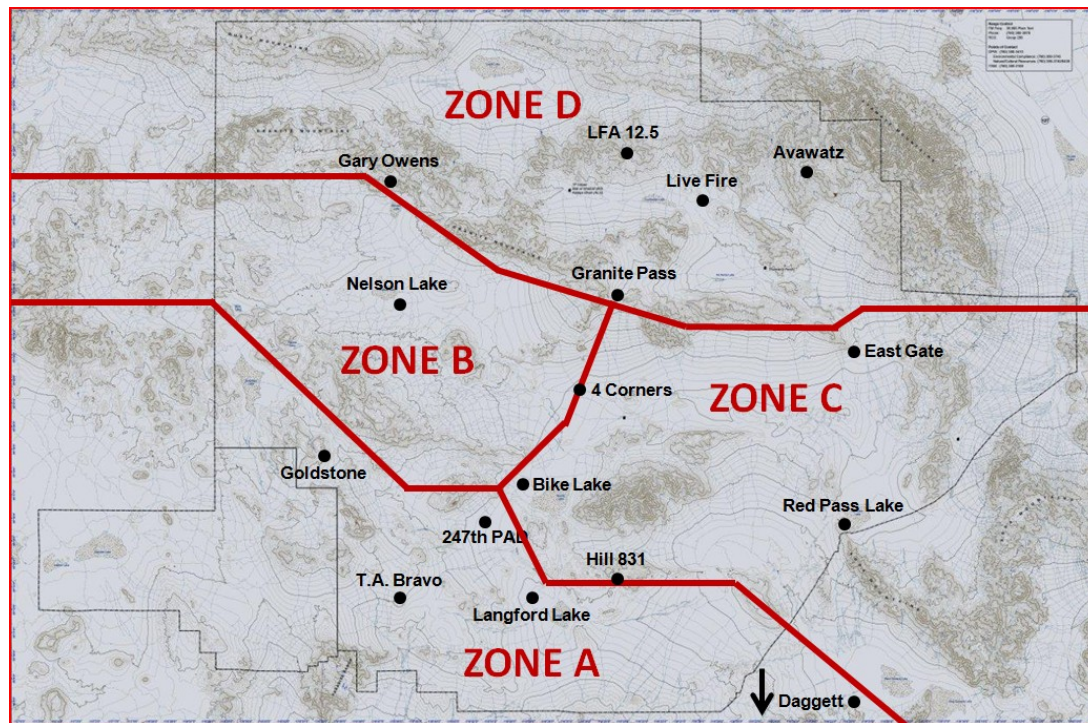
NTC

- > 1K Square Miles
(The size of Rhode Island)
- Challenging MEF
 - Topography
 - Data sparse
 - Unreliable

HANDAR

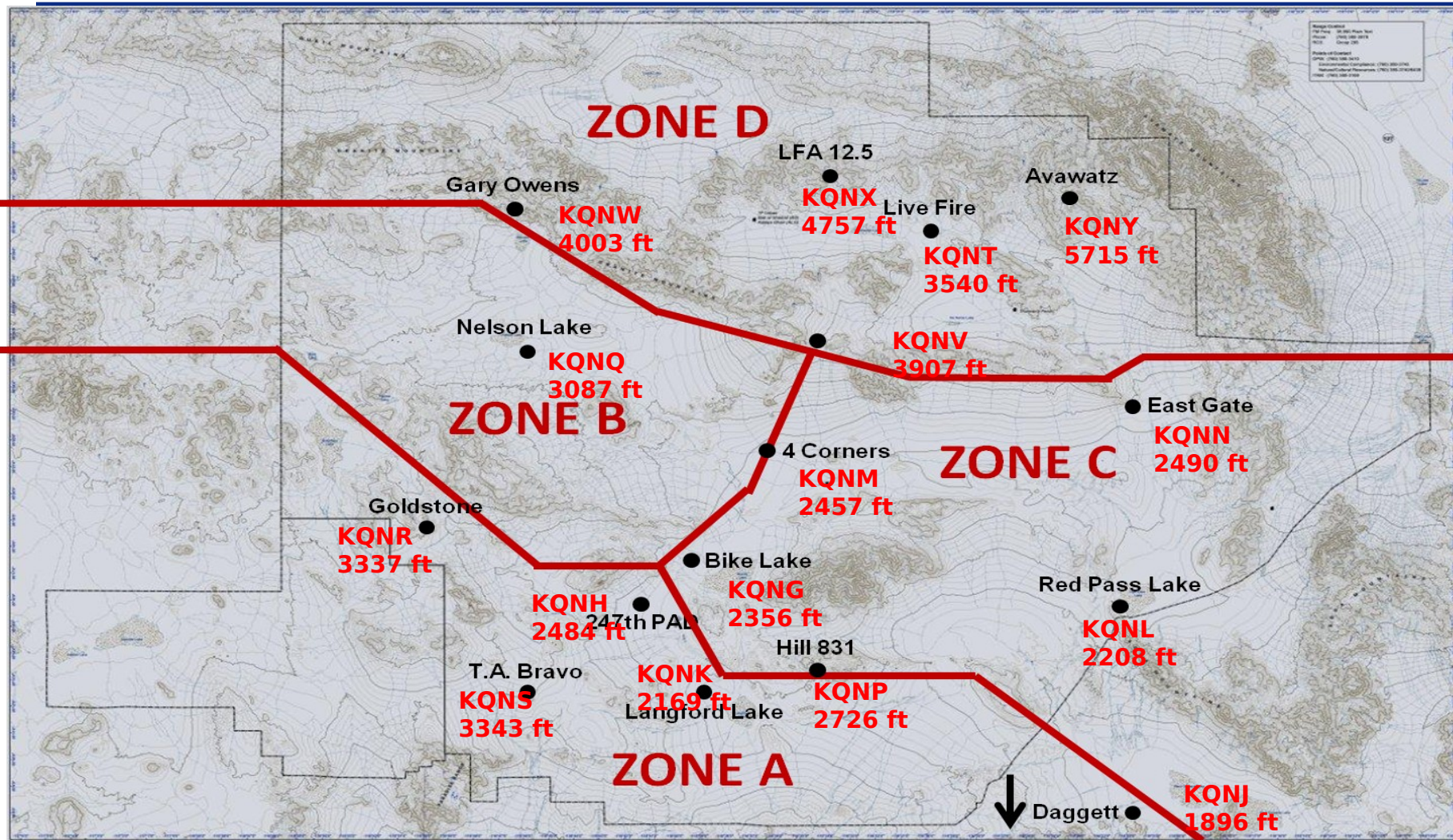


WWA Zone MAP





National Training Center





WWA Criteria

Weather Advisories			
Criteria	Forecast/Observed	Desired Lead Time	Issued By
Winds	≥ 30 kts but < 45 kts	60 minutes	OWS
Hail	Hail $< \frac{3}{4}$ inch	30 minutes	OWS
Icing	Below 10,000ft (intensity $>$ light)	60 minutes	OWS
Surface Winds	Gust spread (peak to lull) ≥ 15 kts	Observed	WF
Surface Winds	Gust spread (peak to lull) ≥ 10 kts but < 15 kts	Observed	WF
Turbulence	Moderate Turbulence below 10,000ft (Category I aircraft)	Observed	WF
Weather Watches			
Watch Type	Criteria	Desired Lead Time	
Tornado	Tornado or Funnel Cloud	N/A	OWS
Damaging Winds	Winds ≥ 45 kts	N/A	OWS
Hail	$\geq \frac{3}{4}$ inch	N/A	OWS
Heavy Rain	≥ 0.5 " in 12 hrs	N/A	OWS
Lightning (Barstow-Daggett only)	Within 5 nm	30 minutes	OWS
**Lightning (NTC only)	Potential exists	30 minutes	OWS
Weather Warnings			
Warning Type	Criteria	Desired Lead Time	Issued By
**Tornado	Tornado expected; Tornado expected within NTC	30 minutes	OWS
**Strong Winds	Winds ≥ 45 kts	60 minutes	OWS
Hail	$\geq \frac{3}{4}$ inch	60 minutes	OWS
**Freezing Precipitation	Any	30 minutes	OWS
Heavy Snow	≥ 2 " in 12 hrs	120 minutes	OWS
Heavy Rain	≥ 0.5 " in 12 hrs	120 minutes	OWS
Lightning	Within 5 nm; Within NTC	Observed	OWS
**Turbulence	Below 10,000ft moderate occasional severe or greater (Cat I aircraft)	60 minutes	OWS
**Turbulence	Below 10,000ft moderate occasional severe or greater (Cat II aircraft)	60 minutes	OWS



DEPLOYMENT TIMELINE

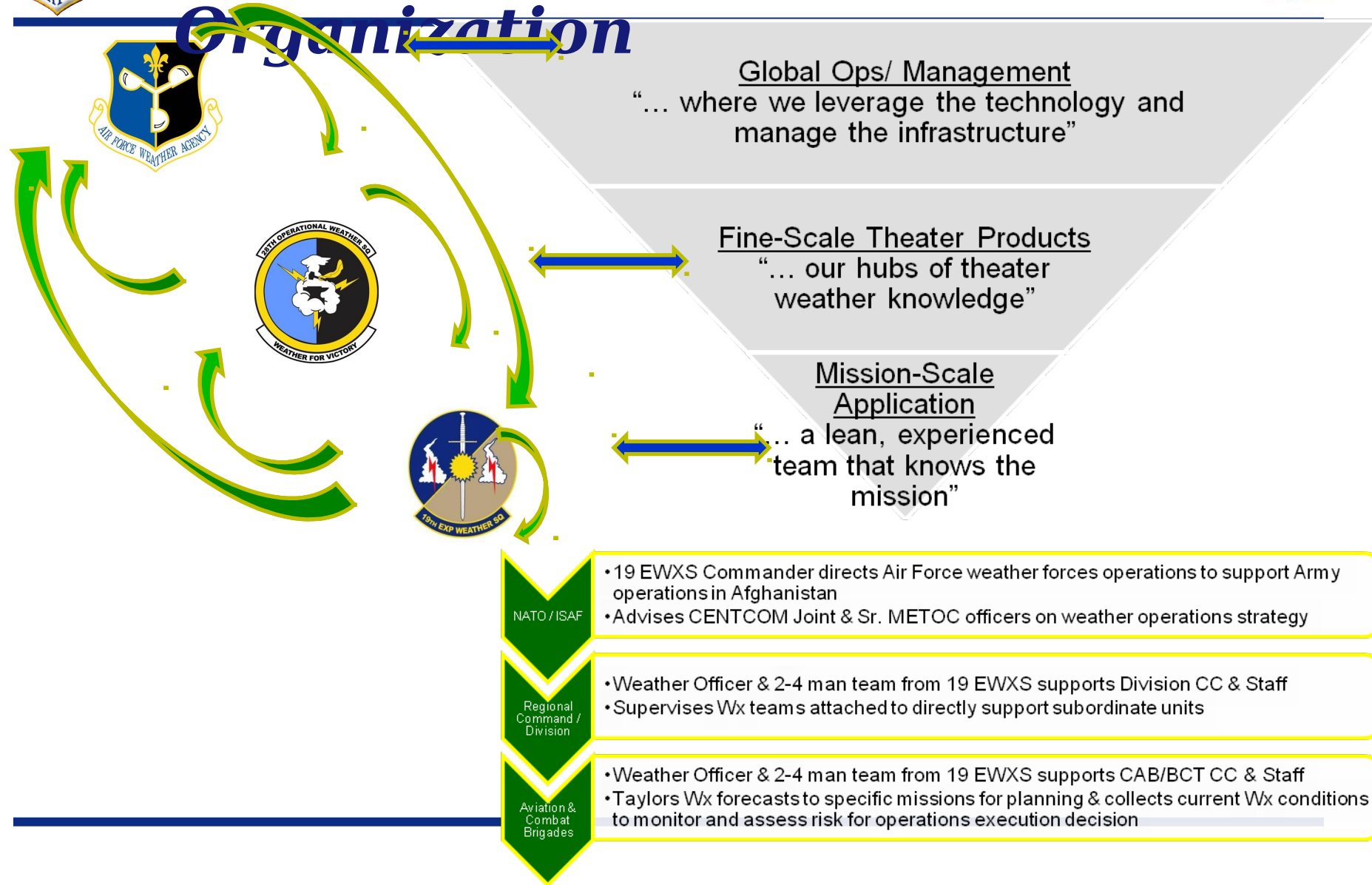


This is a rough guideline. Every rotation is slightly different.

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- **Pre-deployment preparation/coordination at Home Station**
 - **Arrival to NTC with Army customer**
 - **RSOI 1-5 (Mon-Fri)** (Reception, Staging, Onward-Movement, and Integration):
 - **Move from Ruba (Dust Bowl) to FOB, Equipment Setup, OC/T in-brief**
 - **RSOI 1: Plan to have the entire team meet with the OC/Ts for the in brief**
 - **RSOI 1-4: Receive equipment, support customer as they prepare to “deploy”**
 - **RSOI 5: “Deploy” to the training area**
 - **TD1-14: Training, Weather OC/T Review, AAR with the weather OC/T**
 - **TD 14 (Friday): ENDEX will be called sometime on TD 14.**
 - ~~**BRD 1-5 Return to Home Station with Army customer.**~~
(Usually not until Mon-Tue)



Weather Support Forces Operational Organization





Weather Support Forces Operational Organization



Brigades require long range planning weather and weather for planning and executing combat operations.

Combat Aviation Brigades - these need the most weather support. A typical weather station is set up to support the CAB where Mission Execution Forecasts and 175-1 weather briefings are used.

Unmanned Aerial Vehicles - each BCT has a UAV unit which required flight weather briefings. Additionally long range planning weather is used to optimize UAV use.





OC/T Role

- **Bicycle Lake AAF (KBYS) Weather Flight**
 - **Hours of Operation: 24/7**
 - **Considered the NTC Division SWO**
 - **MEF Issuance: (PST) 07L/15Z, 15L/23Z and 23L/07Z**
(-1 Hour Zulu time during Daylight Savings Time)
- **OC/Ts Will:**
 - **Ensure EXROE are followed**
 - **Observe the BWT under field conditions**
 - **Coach and evaluate the BWT**
 - **Provide a written AAR to BWT prior to departure**





OC/T Role

- **OC/Ts Are:**
 - **Safety Observers**
 - **Exercise Coordinators**
 - **Mentors/Coachers**

 - **OC/Ts Are Not:**
 - **Friends for the players (keep it professional)**
 - **A link to the outside world (PX/Burger King)**
 - **Necessarily instructor qualified**
 - **But we will recommended improvements to operations/techniques**
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25 OWS Role

- **The 25th Operational Weather Squadron will issue a Military Operations Area Forecast (MOAF) three times a day **08L/15Z**, **16L/23Z** and **00L/07Z**.**
 - **The 25 OWS will METCON with BLAAF Weather Flight AND the deployed BWT prior to issuing the MOAF.**
 - **METCON with the 25OWS and BLAAF CWT takes place over DCO (Defense Connect Online)**
 - **The 25 OWS will issue and disseminate all WWA Criteria via JET. WWA's are displayed on the 25 OWS web page, <https://ows.dm.af.mil>.**
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OWS - WF

Interaction

- **OWSs conduct analysis and forecast processes that turn data into information (characterizations)**
 - **WFs tailor and integrate characterizations into military decision making processes**
 - **WFs provide eyes forward presence for the OWS installation forecaster: relay weather info not found in coded bulletins**
 - **WF translates characterization into mission impact and offers mitigation options to military decision makers**
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- **WF reliant on accurate characterizations**



OWS - WF Interaction

- Situational Awareness and Collaboration is key to effective OWS - WF relationship
- Tools:

Identify the problem(s) of the day: Rules of Thumb Forecast Reference Notebook KDOV Checklist

Forecast Challenge: 25kts/25kts Advisory/Warning Criteria expected: 25kts/25kts

MAX / MIN Temp Expected: OB Trend RAW TAF
MAX Temp: 20 MIN Temp: 07

Potential Mission Limitations

	Thunderstorms	Non-Conv Winds	Freezing Precip	Heavy Precip	Visibility/Ceiling
24-48 Hr	No	>= 25 < 35kt	No	No	< 3000 / 3
48-72 Hr	No				
72-96 Hr	No				

MAX / MIN Temp Expected: OB Trend RAW TAF
MAX Temp: 00 MIN Temp: -07

Potential Mission Limitations

96-hr Threat Assessments

Long Range Forecast Discussion Impacts for KRDR

One or more of the following threat criteria have been identified for your base:

Severe Winds >= 50 Kts, Severe Hail >= 3/4 in., Heavy Precip (Snow/Rain) 2" in 12 Hrs, Freezing Precip, or Blizzard Conditions.

Date/Time	Threat
24-48 Hr	Heavy snow - 2-4 inches - northern NM/WI/MI Freezing precip - Northern KY/Southern OH Non-Convective Warning Winds - 35-45 kt winds - Dakotas/Northern NE/IA/MN/Northern WI
48-72 Hr	Heavy snow - 3-5 inches - Northern High Plains, MN Freezing precip - NE, IA, Central IL, Central IN Non-Convective Warning Winds - 35-45 kts winds - OH River Valley, Central Appalachians
72-96 Hr	Heavy snow - 2-6 inches - Dakotas, MN, IA, NE, WI, MI Lake effect snow - 2-3 inches - NY/PA
96-120 Hr	N/A

KRDR TAF

TAF Reasoning:

1: KRDR is currently under the influence of an Alberta High and an approaching Alberta Low. Upstream observations have CAT D conditions with CAT B and C conditions approaching. Current METSAT imagery displays mid to high clouds at and upstream of station, with lower clouds further west as seen on IR-NB. RADAR is currently displaying no precipitable echoes within 124NM. VAD is displaying no data in the lower 5k ft. Altimeters will drop with the approaching Alberta Low as indicated on NAM thickness models and NAM meteorogram. Altimeters were forecast using NAM meteorogram which



Analysis and Discussion Products

Collaboration Tools imbedded in the 1 WXG Smart Worksheet allow WF to review forecast reasoning and comment to Shift Supervisor and Installation Forecaster before TAF is disseminated

Web-based TAF worksheet

Draft TAF: Printable KTCM Draft TAF

KTCM TAF 2721

BECHG 2802/2803 YR804KT 9999 SCT050 SCT120 QNH301518Z

BECHG 2816/2817 19009KT 9999 SCT050 SCT120 QNH301518Z

Shift Supervisor Comments:

WITH THE CURRENT NO PAC LOW FAR OFF THE COAST OF WIA, HIGH CEILINGS ARE PRESENT AND THE ATMOSPHERE WILL BECOME MUCH MORE SATURATED AS IT MOVES INTO THE ADR. GRADIENT WILL REMAIN FAIRLY LOOSE AND AS THE NO PAC LOW MOVES IN, LOWER CEILINGS WILL PRESENT WITH LIGHT PRECIP. TEMPS AND ICING GOOD. TAF LOOKS GOOD.

Collaboration comments: (what changes were made after phone collaboration)

Final TAF: Printable KTCM TAF WS

KTCM TAF 2721/2821 19009KT 9999 BKN150 QNH301518Z

BECHG 2802/2803 YR804KT 9999 SCT050 SCT120 QNH301518Z

BECHG 2814/2815 19009KT 9999 -RA BKN025 OVC050 620704 QNH299518Z T12/2800Z T04/2808Z

TAF Data for Metrics:

	4 hr	8 hr	12 hr	24 hr	Wind Dir (°)	4 hr	8 hr	12 hr	24 hr
Wind Spd (kts)	2	1	3	9		210	210	200	200
VIS (CAT)	D	D	D	D	CHG (CAT)	D	D	D	D
ALSTG (ins)	3013	3007	3002	2995	TEMP (°C)	10	6	4	8

CWF Entries

CWF Forecaster Inputs:

Significant Events:

From 0127/11 19:59Z: I WAS THINKING PRECIP WOULD START BY 15Z, JUST LOOKING AT THE MODEL DATA CONTINUE TO BRING IT IN FASTER AS THE MODEL UPDATES. SUGGEST TO LOWER ALTIMETERS WITH THE TREND FORECAST TO DROP OVER THE PERIOD. I THINK WIND DIRECTION FOR LINE 3 SHOULD BE MORE SOUTHEASTERLY LIKE 170-190.

SAVE CWF ENTRIES

No Previous Amendments



OWS - WF

Interaction

- **OWS provides meteorological services to over 200 flying units w/o indigenous WFs**
 - **Total Force in CONUS, Alaska, Hawaii**
 - **Operating locations “forward”**

 - **OWS provides:**
 - **Special Weather Statements, Watches and Warnings**
 - **Flight Weather Briefings**
 - **Situational Awareness for Supervisors of Flying**
 - **Weather Products for Emergency Mgmt (CBRNE Ops, CDM, EDM, advice...)**
 - **Coordinates and provides exercise support**
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BLAAF Role

The BLAAF Weather Flight (Weather Team permanently assigned to Ft. Irwin) will:

- Issues 5-Day Weather Planning Outlooks/Forecast once a day (NLT 1600L)
(The 5-Day Outlook is posted on the Fort Irwin/NTC webpage)**
 - Issues Mission Execution Forecasts (MEFs) 3 times daily**
 - Provide local area (MEF) or 175-1 pilot weather briefs to NTC Flight Detachment and
aviation assets assigned to the NTC/KDAG;**
 - Provide Division-level support to NTC personnel in the form of; CG updates, planning
weather to all NTC support units, and operational weather updates**
 - Relays current and forecast weather data (as required) to Warrior TOC via phone and all
12 CTS Ravens in the field via RCS Radio.**
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- Collaborate on all weather products via DCO (defense connect online)**



Deploying BWT Rules

DOS

- **Do keep an open mind**
- **Do ask questions**
- **Do put your equipment through its paces (its better to learn its limitations in training)**

DO NOTS

- **Do not put your hands on any of the role players (i.e. don't tackle someone who is "attacking" your FOB.**
 - **Do not move to a new location without letting the weather OC/T know first**
 - **Do not mess with the wild life (snakes, spiders, scorpions, donkeys, tortoises, etc.)**
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Deploying BWT Role

- **The deploying BWT is responsible for all products in conjunction with their BWT-Customer Memorandum of Agreement (MOA) for their local Area of Operations (AO).**
 - **The deploying BWT will METCON with the 25 OWS AND the BLAAF CWT to ensure their MEF and other forecasts are horizontally consistent with 25 OWS' MOAF and WWA criteria.**
 - **The deploying BWT will pre-coordinate any customer unique WWA criteria that is not covered by NTC criteria with the 25 OWS. The 25 OWS issues ALL WWA's!**
 - **Request a **KQ** identifier prior to deployment through AFWA.**
 - **Submit a SAR NLT 30 days prior to arrival to the 25 OWS. Any customer unique WWA criteria needs to be requested in the SAR!**
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- **Contact the NTC Weather OC/T team upon arrival at DSN 470-4363 (or**



Army Responsibilities

MTOE

Ammunition

CBRNE equipment and training

Vehicle maintenance, fuel, lubricants, parts

Commo links

Commo equip (computers, DCGS, phones, radios)

Office space and office supplies

Tactical wx equipment storage

GOVs

Army skills training (common soldier skills, airborne, etc)

TDY funds for Army support/Army training

Details in AR 115-10

Conclusion: Army-support is #1 priority for ACC/A3W for weather funding and manpower. AF/A3O-W backing. G-2 involvement needed to guarantee success.



Deploying BWT





AAR Notes



- **MILES GEAR!**
 - **COMSEC**
 - **PROFESSIONALISM**
 - **COMMUNICATION**
 - **INTEGRATION**
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